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ABSTRACT

As part of the International Adult Literacy Survey, the literacy levels of older adults in the Netherlands were investigated. A sample of 918 adults aged 50-75 was tested on prose, document, and quantitative scales; 40 older adults were interviewed to determine in what contexts they experience literacy problems and what kinds of coping strategies they use. The study found that most adults over age 50 score significantly lower on all scales than do adults under 50. Only on the quantitative scale do scores decrease less with age. Nearly 60 percent of the older adults have scores at level 1 or 2, the more problematic levels of literacy skills. The differences between the two groups can be linked to a large extent to the differences in level of education, but analysis of covariance revealed that there are also age-related factors influencing the literacy abilities of older people. The older adults were careful to avoid situations that would challenge their literacy skills. Many were willing to ask others, especially their children, for help with instructions, manuals, and forms. The older adults were not interested in learning unless it had practical applications, but if such adult education programs could be devised, they might be effective in enhancing their literacy skills. (KC)

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FUNCTIONAL LITERACY OF OLDER ADULTS:

THE CASE OF THE NETHERLANDS

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| Background of the Study | Research Questions | Theoretical Framework | Design of the Study | Results | Discussion | References |

BACKGROUND OF THE STUDY

The way adults use written information they encounter in daily life is a growing concern in many industrialized countries. The ability to respond on documents such as safety rules on the workplace, manuals for new technology, checkbooks, prescriptions, maps, tables and graphs seems to be problematic for increasing numbers of citizens. Today, adults need a higher level of literacy to function well: society has become more complex and low skill jobs are disappearing. Therefore, inadequate levels of literacy among a broad section of the population potentially might threaten the strength of economies and the social cohesion of nations (OECD/Statcan 1995).

The International Adult Literacy Survey (IALS) was a collaborative effort by seven countries with the support of three intergovernmental organizations (OECD, Unesco Institute for Education and the European Union) to get insight into the level of literacy of their populations. A large sample of adults (ranging from 1500 to 8000 per country) in the US, Canada, Germany, Poland, Sweden, Switzerland and the Netherlands were given the same wide-ranging test of their literacy skills during the autumn of 1994. The first international, comparative results were published in the OECD/Statcan report 'Literacy, Economy and Society' in 1995. The overall Dutch results will be published in a country

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report (Houtkoop & Van der Kamp in press). A specific grant, however, was offered by the Dutch Foundation for Educational Research (SVO) for an over sampling of older adults. This paper will be limited to the results of older adults.

The reasons for extra attention for the literacy skills of older adults are obvious. First of all the demographic developments must be mentioned. In all European countries the number of people of sixty years and older will increase sharply. Seventeen per- cent of the 500 millions of inhabitants in Europe is over sixty years old, in the year 2000 this percentage will be twenty percent. In the United States, more than twenty per cent of the population is older than sixty-five. This percentage will also raise until 2000 (Van der Kamp 1991).

In general life circumstances of the elderly are not always easy. On the one hand there is a growing number of older people who are well educated, have a good income and have leisure time. In the world of advertising those are called 'GRAMPIES', i.e. 'Growing Retired Active Monied Persons in an Excellent State'. On the other hand there are older people who have little more than primary education, e.g. in the Netherlands 50 percent of people over sixty-five. Many older people have a low income. Especially older widows are often isolated and confronted with problems in the field of culture, health and care. For the latter the ability to participate in a complex democratic society might have great preventive significance. This demands basic skills such as literacy and numeracy.

Because of the process of aging of the labor force, older employees will have to contribute more to the productivity of organizations. For the last years, however, in large numbers they have been expelled from the labor market. This is not only a personal problem for these employees, but they have also become an extensive public charge.
Also in this respect a sufficient level of literacy skills of their aging population seems to be an important prerequisite for economic competitiveness and social cohesion.
Until recently, however, a large-scale insight into the literacy level of the Dutch population was lacking. That was a good reason for Dutch government to seize the opportunity to participate in the joint venture of IALS.

RESEARCH QUESTIONS

a) What are the literacy skills of older adults (50-75) in comparison to those of other adults?

b) What are the literacy skills of different age-categories of older adults in relation to relevant background variables?

c) In which literacy contexts older adults experience problems, what kinds of coping-strategies they develop and what are possible intervention-strategies to help them?

THEORETICAL FRAMEWORK

The theoretical framework of IALS has been derived from the former NALS and LSUDA studies in the US and Canada. These studies were inspired by the Young Adult Literacy Survey in 1986 (Kirsch & Jungeblut 1986). This study broke with the traditional stance on literacy assessment. Over the years, literacy had been viewed as a fixed set of skills defined and measured by a single score, with results being applicable in a wide range of contexts. This early conception portrayed literacy as an ability distributed along a single continuum, with higher scores indicating increasing amounts of that ability. From this point of view, a single point on the continuum is selected as a standard that separates the 'illiterates' from the 'literates'. Critics of this approach have pointed out that the estimated size of the illiteracy problem will vary widely as a function of the particular standard or cut-point selected (Proposal NALS).

In contrast to previous literacy surveys, the theoretical approach of YALS, NALS, LSUDA and also IALS made possible the gathering of data that yielded evidence for three distinct aspects of literacy: prose literacy, document literacy and quantitative literacy. 'Prose literacy' contains the knowledge and skills needed to understand and use information

from texts including editorials, news stories, poems and fiction. 'Document literacy' contains the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation, schedules, maps, tables and graphics. 'Quantitative literacy' contains the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a checkbook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement. This new perspective allowed for the development of calibrated scales for each of these aspects of literacy. Within this conception, literacy is a more complex ability, while within the more traditional approaches literacy often was dichotomized and as a consequence 'illiterates' were stigmatized.

The literacy skills assessed in IALS have been limited to written and printed materials. Productive literacy skills will not be assessed because of pragmatic reasons. In this phase it would be too ambitious to measure it within the same assessment. Another dimension that will be measured is the level of cognitive complexity of literacy tasks. These cognitive operations are locating, cycling, integration and generating. The assumption is that more complex operations will be more difficult. The literacy tasks of IALS refer to different functional contexts such as home, citizenship and work.

As far as the relation between literacy and aging concerns, former research (Unesco, 1995) showed a strong negative correlation mainly attributed to the lower educational levels of older people. There is not much known about other age-related factors influencing literacy competence. Because of the low level of education of older adults we expected that they would have lower scores than the younger adults. As women have less education than men, we expected that men would do better.

DESIGN OF THE STUDY

In the Netherlands the total sample of adults was 3090 between 16 and 75 years old. Checked on population parameters this sample appeared rather representative for the Dutch population. The number of people between 50-75 (in this paper the 'older adults') in the sample was 918. The data of all participating countries were used for an Item Response Theory (IRT) Analysis by Educational Testing Service in Princeton. IRT is an advanced psychometric technique for the scaling of both items and respondents. Three satisfactory scales could be constructed: prose, document and quantitative literacy. The scores on these scales vary from 0-500, the scores have been divided into 5 levels from 1 (badly) to 5 (excellently).

In the Netherlands, 40 in-depth interviews were gathered among a selection of older adults who participated in the main assessment to answer the third research question.

RESULTS

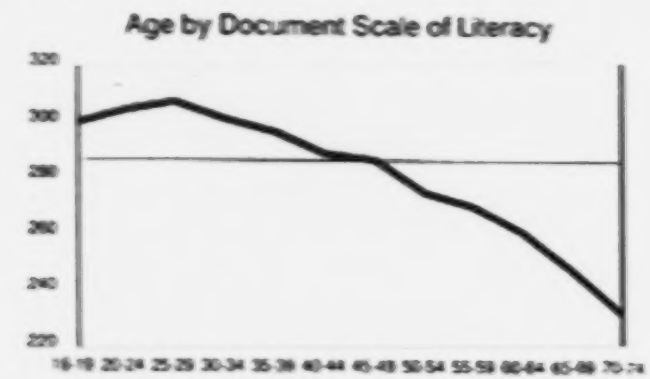
The main findings are that the scores of adults over 50 are significantly lower on all scales than those of adults under 50. Only on the quantitative scale the decrease with age is less than on the other scales. The average score of adults under 50 is at level 3, but the average score of older adults is at level 2. These results are shown in table 1 for all three scales.

Table 1. Proportion of population in age groups over and under 50 years at each literacy level (all scales).

1a. PROSE				
	level 1	level 2	level 3	level 4/5
16-50	6.0	22.3	53.1	18.5
50-75	22.2	40.6	33.4	3.7
1b. DOCUMENT				
	level 1	level 2	level 3	level 4/5
16-50	6.0	19.3	51.4	23.3
50-75	21.2	39.7	32.7	6.4
1c. QUANTITATIVE				
	level 1	level 2	level 3	level 4/5
16-50	6.6	20.9	48.7	23.8
50-75	17.9	34.6	38.0	9.5

Although there is quite some variance in the score profile of the older group, nearly sixty percent have scores at level 1 or 2, the more problematic levels of literacy skills. In figure 1 the development of literacy skills by age is shown for the document scale. There is a sharp decrease after the age of 50.

Figure 1



The three scales show about the same pattern as can be seen in figure 2.
Only the quantitative scale reveal a slightly less decrease than the other scales.

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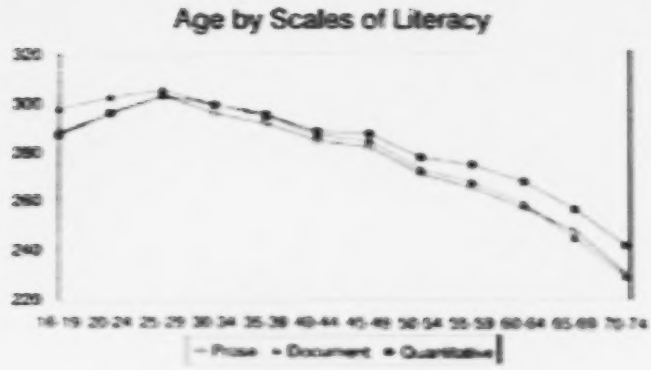
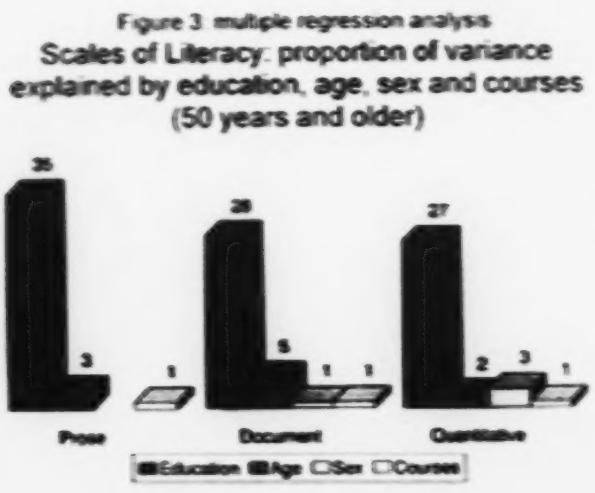
Figure 2



The differences between the two groups can be explained to a large extent to the differences in level of education, but analysis of covariance revealed that there are also age-related factors influencing the literacy abilities of older people.

The results also show remarkable differences within the group of older adults. Multiple regression analysis (see figure 3) revealed that educational level, gender and participation in adult education significantly influence literacy performance. Also labor participation tends to be a positive factor on literacy competence, but this can not be shown in the multiple regression analysis due to the fact that relatively few older adults in the sample still have a job. Older women do not differ from men on the prose scale, but score significantly lower on the document and quantitative scales, probably due to classic role behavior.

Figure 3 multiple regression analysis



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Older adults have in general lower literacy scores than the other adults. But the question is whether this implicates that older adults experience more problems in daily life. It is not easy to give a straight answer. One of the findings presented in the international report of the study (OECD/Statcan 1995) was that adults with low literacy levels often do not recognize that they have a problem. Despite of their low literacy levels many - and also the older - respondents answered in the survey that their reading skills were sufficient to meet their everyday needs.

In the additional qualitative research nearly all of the elderly maintain that they do not experience problems in daily life in situations in which literacy skills are involved. As long as there is any reasonable solution for their literacy needs in daily life they claim that there are no problems. The final outcome is satisfying and that is what matters. But one of the findings of the qualitative study is that many of the older adults are very keen in avoiding situations in which literacy is needed, especially document literacy and literacy related to technology (manuals etc). A majority of the older adults rely on their relatives and acquaintances. "Instructions? I do not understand them and I do not want to understand them. I ask my children, that is much easier.", as one of the interviewees put it. "If I have the chance to rely on somebody else, I will do so..", according to another.

Furthermore, older adults are used to classical role patterns. A lot of older women do not have much experience with regard to document and mathematic tasks. One of them expresses this as follows: "Documents and instructions are not my problem, that is the area of my husband."

These classical role patterns and their dependence on others make a lot of older people vulnerable, especially after important changes in life such as a loss of a partner. Many older adults also rely on the younger generation for specific support in daily life literacy tasks.

One of the major coping-strategies has already been mentioned. A large number of older adults try to avoid difficulties. They make an appeal to someone else, most of the time their children. Sometimes they ask neighbors, colleagues at work, friends and other acquaintances for help. "I do not have to write at work and all my private documents were filled in by my colleagues", one of the interviewees says. The size of their social network is important. Most of the interviewed older persons are not afraid to ask institutions for information for example when they experience difficulties with document-reading. For other documents they hire professional help such as tax-consultants, notaries, accountants.

It is remarkable that a large number of the interviewed older adults said that they like to read all kinds of literature and puzzle frequently. When they experience difficulties, they seek information in libraries, dictionaries and encyclopedias. In this area they help themselves. Is it necessary to use difficult manuals and complicated apparatus they look for alternatives. They do not use, for instance, a cash dispenser but go to the counter of a bank or a post office.

During the interviews older adults complained of complicate documents and instructions in combination with complex machines. In this field there is a lot to improve.
Some of the older adults need literacy skills because of voluntary work or membership of a society. They force themselves to learn all the skills they need to fulfill their task successfully. A woman of 74 years old said: "I learned it by doing it. I was secretary and chairman of a union for elderly. If it is of interest for you, there is a lot to learn." This is the reason why many older adults are active in the field of literacy. In this area there seems possibilities to encourage older adults.

For learning programs with older adults it seems necessary that these fit with their interests. Many older adults are aimed at the direct functionality and practical usefulness in daily life of the subject matter they learn. Some of the interviewees told that they were not very motivated by a number of literacy tasks in the adult literacy survey because these tasks were not of practical use for them in daily life (hiring interview etc.).

DISCUSSION

It is obvious that older adults are a group-at-risk. Because of their low level of literacy skills many older people have a bigger chance to loose their job and to social exclusion. The latter seems especially the case for older women. Recently there is much discussion in the Netherlands on the legitimation of educational activities for older adults. This study has shown that participation in adult education might be effective to enhance literacy skills of older adults.

One the other hand it is not fair just to blame the victim. The impenetrability and unnecessary complexity of many prescriptions, manuals and officially documents is not only for older people a plague. Improvement of the design process of many functional documents is no luxury.

This study has been carried out within the framework of the International Adult Literacy Survey. IALS offered an excellent opportunity for the participating countries to gain insight into the reading and numeracy skills of their adult populations. Until now such a large-scale empirical study was missing. The international data-set will make it possible to compare the Dutch findings for older adults with those of the other participating countries. In spite the need and relevance of IALS a lot of work remains to be done, because the survey is not be designed to answer all questions on literacy. Writing and speaking, for example, are domains of literacy still to be explored. IALS also was a one-shot approach. Important research questions concern the obsolescence and increase of literacy skills in relation to aging, labor participation, participation in adult education and social participation. A correlative kind of research can give us indications, but longitudinal research might give us more insight into the development and obsolescence of literacy skills across the life span.

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